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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,421	02/23/2004	Paul D. Verhagen	13222.01/YOD ITWO:0020--1	2564
7590 12/29/2004			EXAMINER	
Patrick S. Yoder FLETCHER YODER P.O. Box 692289 Houston, TX 77269-2289			LEUNG, PHILIP H	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/784,421

Applicant(s)

VERHAGEN, PAUL D.

Examiner

Philip H Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4, 11-15 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 11-15 and 20-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2-23-2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

1. Applicant's election without traverse of Group I, claims 1-4, 11-15 and 20-23 (newly added) in the reply filed on 10-4-2004 is acknowledged. The non-elected claims 5-10 and 16-19 have been cancelled.

2. The disclosure is objected to because of the following informalities: there is no description in the specification for the term "interface circuit" which is one of the essential elements of the claimed invention. Furthermore, the description in the specification does not all conform to the drawings. For instance, the description at page 19, lines 8-21

"As best illustrated in *FIG. 6*, the positive voltage jacks 640 and the negative voltage jack 642 of each of the electrical connectors 604 are electrically coupled through a first ferrite 646 and a second ferrite 648. The first and second ferrites prevent erroneous readings and/or damage to the recorder 260 and control unit 252 due to voltage spikes picked up by the thermocouple 60 or extensions. In addition, each positive voltage jack 640 and each negative voltage jack 642 is electrically coupled to ground 650 through a capacitor 652. The capacitors 652 are selected to have a low impedance to AC signals at noise frequencies. Preferably, the capacitors are selected to have a low impedance at radio frequencies, i.e., the operating frequency of the electricity flowing through the induction heating cable. The low impedance of the capacitors 652 at noise frequencies results in the electrical noise being shunted through the capacitors 652 to ground 650. Thus, the electrical noise does not continue on to the recorder 260 and control unit to interfere with data recordation and control of the system 50. In addition, the capacitors 652 block the DC voltage produced by the thermocouples 60. Thus, the DC voltage from the thermocouples 60 is not shunted to ground 650 but continues on to the recorder 260 and control unit 252. Additionally, each of the ground jacks 644 are electrically coupled to ground 650; thereby grounding the shielding

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conductor 632. Therefore, any electrical noise picked up by the shielding conductor 632 is electrically coupled to ground 650.”

are inaccurate. It appears that “Figure 6” should be “Figure 8”. Furthermore, the elements 640, 642, 644, 646, 648, 650, 652, etc. are not shown in Figure 6 or 8, actually, they are not in any Figure.

Appropriate correction is required.

3. The drawings filed 2-23-2004 are objected to because many elements described in the specification are not shown in the proper Figures to commensurate with the specification. For instance, as pointed out above, “elements 640, 642, 644, 646, 648, 650, 652, etc.” are not shown in the drawings.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 11-15 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pacileo (5,185,513), in view of Gipp et al (US 5,449,234) or Muller (US 3,667,476) (all cited by the applicant).

Pacileo shows a controller for a heating system including a control circuit 10, a temperature sensor 14 and an interface circuit 16 to couple the temperature feedback device to the control device to control the power supply 22 (see Figures 1 and 2 and col. 4, line 22 – col. 6, line 25). Therefore, Pacileo shows every feature and structure as claimed except for the use of a capacitor to connected the conductors to ground. Gipp shows a temperature sensing system with a thermistor 502. It teaches to ground a terminal 706 of the thermistor 502 through a capacitor 708 to reduce interferences and noises (see Figures 7 and 8 and col. 6, line 34 – col. 7, line 38). Muller also shows a temperature sensing system using a temperature measuring circuit 38 with a part Q5 thereof connected to ground through a capacitor C4 to filter out unwanted noise (see Figure 1 and col. 6, lines 48- 65). It would have been obvious to an ordinary skill in the art to modify Pacileo to ground the terminals of the thermocouple to ground through a capacitor in order to reduce electrical noises for a more accurate temperature feedback control system, in view of the teaching of Gipp or Muller.

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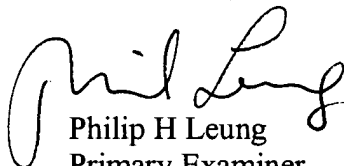
6. The prior art made of record below is considered pertinent to applicant's disclosure:

Peters, Jr. (US 3,886,342) and Battocletti (US 4,613,818) are further cited to show devices with a temperature sensing system having various claimed features.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (571) 272-4782.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Philip H Leung  
Primary Examiner  
Art Unit 3742

P.Leung/pl  
12-23-2004